

LG&E - KU - Mill Creek Apportioned Costs Rev. B (Without SCR)

B&V PROJECT #: 168908
PROJECT ESTIMATOR: Ron Fields
PROJECT MANAGER: Tim Hillman
PURPOSE OF ESTIMATE: Budgetary
ESTIMATE DATE: April-11

LOCATION: Jefferson County, KY
PLANT TYPE: PC Fired Boiler
CLIENT: LG&E - KU
PARTNER: N/A
CURRENCY: US Dollars

Section 1: Mill Creek ⁸	Engineered Equipment				Variable O&M		Equipment Demolition		\$/KW ⁷
	Total Project Cost ¹	Purchase Cost ²	Fixed O&M Cost	Cost ³	Total O&M Cost ⁴	Levelized Annual Cost ⁵	Cost ⁶		
Unit 1	178,836,421	29,180,282	404,000	8,432,397	8,836,397	30,600,789	444,170	542	
Unit 2	174,693,394	27,676,050	404,000	9,000,599	9,404,599	30,664,785	744,170	529	
Unit 3	174,664,312	29,850,690	425,000	12,507,839	12,932,839	34,189,486	1,382,838	413	
Unit 4 - A	312,731,983	91,596,301	476,000	15,539,326	16,015,326	54,074,808	744,118	596	
Unit 4 - B	320,865,690	91,547,243	476,000	15,539,326	16,015,326	55,064,681	460,000	611	
Common Facilities	45,949,988	2,778,480	-	-	-	5,592,114	-	-	
Total Mill Creek (with option 4A)	886,876,098	181,081,804	1,709,000	45,480,161	47,189,161	155,121,982	3,315,297	2,080	
Total Mill Creek (with option 4B)	895,009,806	181,032,746	1,709,000	45,480,161	47,189,161	156,111,854	3,031,179	2,095	

Section 2: Mill Creek ⁹	Engineered Equipment				Variable O&M		Equipment Demolition		\$/KW ⁷
	Total Project Cost ¹	Purchase Cost ²	Fixed O&M Cost	Cost ³	Total O&M Cost ⁴	Levelized Annual Cost ⁵	Cost ⁶		
Unit 1									
Scrubber Upgrade	56,990,737	-	-	32,000	32,000	6,967,773	-	173	
PJFF	113,878,910	26,180,282	356,000	967,086	1,323,086	15,182,149	444,170	345	
PAC Injection	2,829,646	1,000,000	13,000	5,138,677	5,151,677	5,496,045	-	9	
Sorbent Injection	4,203,496	2,000,000	35,000	2,244,634	2,279,634	2,791,199	-	13	
Neural Network	933,634	-	-	50,000	50,000	163,623	-	3	
Common Facilities	11,487,497	694,620	-	-	-	1,398,028	-	-	
Total Mill Creek 1	190,323,918	29,874,902	404,000	8,432,397	8,836,397	31,998,817	444,170	542	
Unit 2									
Scrubber Upgrade	55,535,963	-	-	113,000	113,000	6,871,727	-	168	
PJFF	111,394,607	24,676,050	356,000	941,814	1,297,814	14,854,538	744,170	338	
PAC Injection	2,761,910	1,000,000	13,000	5,523,879	5,536,879	5,873,003	-	8	
Sorbent Injection	4,091,114	2,000,000	35,000	2,371,906	2,406,906	2,904,794	-	12	
Neural Network	909,801	-	-	50,000	50,000	160,723	-	3	
Common Facilities	11,487,497	694,620	-	-	-	1,398,028	-	-	
Total Mill Creek 2	186,180,891	28,370,670	404,000	9,000,599	9,404,599	32,062,813	744,170	529	
Unit 3									
Scrubber Upgrade (U4 tied in for U3)	60,032,232	-	-	597,720	597,720	7,903,643	-	142	
PJFF	105,927,578	26,850,690	377,000	1,527,247	1,904,247	14,795,633	1,382,838	250	
PAC Injection	3,637,451	1,000,000	13,000	7,103,769	7,116,769	7,559,447	-	9	
Sorbent Injection	4,178,124	2,000,000	35,000	3,229,103	3,264,103	3,772,581	-	10	
Neural Network	888,927	-	-	50,000	50,000	158,182	-	2	
Common Facilities	11,487,497	694,620	-	-	-	1,398,028	-	-	
Total Mill Creek 3	186,151,809	30,545,310	425,000	12,507,839	12,932,839	35,587,514	1,382,838	413	
Unit 4 - A									
WFGD	184,456,747	62,730,209	-	1,542,889	1,542,889	23,991,275	644,118	351	
PJFF	116,878,363	25,866,092	428,000	1,370,218	1,798,218	16,022,315	100,000	223	
PAC Injection	5,121,885	1,000,000	13,000	8,649,490	8,662,490	9,285,824	-	10	
Sorbent Injection	5,323,570	2,000,000	35,000	3,926,728	3,961,728	4,609,607	-	10	
Neural Network	951,418	-	-	50,000	50,000	165,788	-	2	
Common Facilities	11,487,497	694,620	-	-	-	1,398,028	-	-	
Total Mill Creek 4A	324,219,480	92,290,921	476,000	15,539,326	16,015,326	55,472,837	744,118	596	
Unit 4 - B									
WFGD	188,833,524	62,132,409	-	1,542,889	1,542,889	24,523,929	100,000	360	
PJFF	119,659,756	26,414,834	428,000	1,370,218	1,798,218	16,360,810	360,000	228	
PAC Injection	5,854,369	1,000,000	13,000	8,649,490	8,662,490	9,374,967	-	11	
Sorbent Injection	5,568,749	2,000,000	35,000	3,926,728	3,961,728	4,639,445	-	11	
Neural Network	949,293	-	-	50,000	50,000	165,529	-	2	
Common Facilities	11,487,497	694,620	-	-	-	1,398,028	-	-	
Total Mill Creek 4B	332,353,187	92,241,863	476,000	15,539,326	16,015,326	56,462,709	460,000	611	
Total Mill Creek (with option 4A)	886,876,098	181,081,804	1,709,000	45,480,160	47,189,160	155,121,981	3,315,297	2,080	
Total Mill Creek (with option 4B)	895,009,806	181,032,746	1,709,000	45,480,160	47,189,160	156,111,854	3,031,179	2,095	

Notes:

- Total Project Cost = project capital cost for installed equipment + demolition cost (as applicable). O&M is not included.
- Cost to purchase EPC Engineered materials and associated equipment. Does not include contractor bulk commodities and furnish and erect pricing.
- Variable costs include auxiliary power costs.
- Combined fixed and variable O&M costs.
- Levelized annual cost = Total Project Cost x Capital Recovery Factor (12.17%) + Total O&M Costs
- Cost to remove various existing equipment to accommodate installation of new AQC equipment.
- Based on Total Project Cost. \$/KW = Total Project Cost / (Unit MW Capacity x 1000)
- The cost data contained in this section are based on updates to the March 14, 2011 Mill Creek AQC Budgetary Cost Analysis Report Document.
- The costs contained in this section for each piece of equipment have been apportioned from the Section 1 costs.